183 by the glance of a stranger. In 1886 in Baysun when I had to carry out astronomical observations from the roof of my dwelling, because there was no other suitable place, all the surrounding houses were emptied of their occupants for the night in question.

342 Each of these two parts is divided again into two or perhaps three subdivisions, depending on the circumstances: the living quarters, the courtyard and the garden, the last of which is usually lacking among the poorer people. Especially in arid regions and in towns densely built up, the inhabitants must content themselves with a simple court, while the gardens are relegated to a place outside the town walls. Where there is a garden, it is usually divided from the court and dwelling houses by a wide partition wall. As a rule, the general arrangement of the dwelling houses, sheds, courts, and gardens is that indicated in the two sketches above (Figures 82, p. 63a and 83, p. 229), of which the first shows the vertical cross section, and the second the ground plan of an average dwelling.

The dwelling houses, which consist of one or more rooms situated next to each other, the number depending upon the financial means of the owner, are built along the outer wall in such a way that this wall always forms the rear wall of the dwelling. The dwellings are almost exclusively one-story houses, which is partly due to the building material used, and partly to the frequent earthquakes. (2)

731 2. The frequency of earthquakes differs widely in different parts of Turkestan. While rare in many regions, as in Samarkand, for example, other places are often visited by earthquakes. The town of Vernoye /Alma Ata/, for example, was almost completely destroyed by one on June 9th, 1887, and since then it has felt earth tremors of greater or lesser intensity almost every day. Also in Osh, at the eastern end of the Fergana valley, there were almost daily earthquakes for a period several years ago. In Tashkent there are on the average about a dozen earthquakes in the course of a year. On the whole in Turkestan the earthquakes are light and rarely result in the caving in of houses and the loss of human life. In Tashkent I experienced only two such earthquakes in fifteen years, of which the one of November 29, 1886 was the strongest and caused considerable damage. The greatest earthquake in Turkestan of recent times was the

731 one already mentioned in Vernoye /Alma Ata/, which was felt all over Turkestan.

342 The walls of the dwelling houses are made of the same material as the town, court and garden walls, and erected in practically the same manner. In the court a large pit is dug, and the earth from it is kneaded with water and chopped straw into a sticky paste. From this large balls are formed, and these are piled up on each other and stamped down with the feet. Like the town and garden walls the house walls too are erected by layers, for the lower layer must always be allowed to dry first /231/ before a further layer can be placed on top. The straw which is mixed with the clay gives the walls great solidity, especially since the seeds remaining with the straw turn into buds under the great heat of the sun and grow through the walls in all directions, so that on the outside of newly built houses countless barley and wheat stalks are sprouting forth. Such a wall holds up much better in an earthquake than one built, no matter how solidly, of firebricks. Firebricks are not used for the building of private houses and are employed only for the larger public buildings like mosques, medreses, caravansaries, and baths, where their use is unavoidable since clay walls naturally cannot hold up under the heavier weight. In the rare cases when a dwelling house has an upper story superimposed, the walls of the second story are produced in a special manner with a combination of wood and clay. First a wooden frame of medium heavy beams is joined together and a large number of short thin wooden sticks are set in between the beams in a completely irregular fashion, usually fanwise. The spaces between the main beams and the wooden sticks are then filled in with balls of clay, and finally the whole is plastered over, inside and out, with a thick layer of clay so that nothing remains visible of the wooden framework except, at most, the ends of the main beams (cf. Figure 158). This upper story, which is not used for living quarters but only for storage, bears the Persian name bala-khana, from bala (upper) and khana (room), from which the Russian balagan (fair-booth) has obviously been derived, and probably also our "balcony".

The dwelling houses have no foundation, and they would be quite superfluous anyway because the ground, consisting of loess, has the same solidity as the walls themselves, which are constructed of the same material. The absence of foundations has the dis-